north and south porches. Money has been raised by subscriptions, and grants have been promised from the Diocesan and Incorporated Church Building Societies. A parsonage-house in course of time, and also schools, ultimately are contemplated. Mr. Chas. Wyatt Orford is the architect.——The 'Gospel Elm' at Stratford-on-Avon having been cut down as a rotten stump which only 'cumbered the ground,' was found when too late to be perfectly fresh and sound at the core, and beautifully grained, particularly towards the crown, with scarcely a flaw. The whole was divided into lots, and produced 23*l.* 13*s.*, which will no doubt be multiplied to some profit when converted into articles of furniture and other memorials of the past, as a last consolation to those who lament its untimely end.——The public baths erected at Westbromwich at the expense of the Earl of Dartmouth, consist of four private apartments, with dwelling-house for the bath-master.——A new Roman Catholic church and schools are to be erected at the north end of Liverpool, as the most fitting monument to the memory of those worthy Catholic clergymen [nine or ten, if not more in number, if we rightly remember], who have sacrificed their lives as successive victims to fever in the discharge of their duties to the poor.——A spire, we hear, is to be added to Misterton Church, Trentside, which is now undergoing extensive alterations and repairs.——The improvements and restorations recently effected in the chancel of the parish church at Doncaster, are said to be satisfactory. Every portion of the chancel, says the local *Gazette*, is now visible at one glance; the piers shoot upward, free from the unsightly obstacles which previously stunted them; the communion table is rendered more free from incumbrance; and the eastern window assumes a more imposing and impressive character. No doubt the lovers of sacred architecture would be further gratified if the same taste, which has forcibly shewn itself with regard to the chancel, was rendered further manifest in the nave, side aisles, and transepts. This might be accomplished by cutting down the whole of the pews to a yard in height; removing, at the same time, all green baize and coloured cloth,—a custom which, with regard to lining pews, is more honoured in the breach than in the observance. The full extent of improvement, however, cannot be effected until all the unsightly galleries are cleared away.——A memorial is being signed at Gateshead, for presentation to the town council, praying that body to carry into effect the Baths and Washhouses Act, for the passing of which the inhabitants themselves petitioned.——The iron masters, both in Lanarkshire and Ayrshire, have resolved upon further reducing the wages of their workmen.

New Books.

Elements of Geometry. By J. D. London: Longman and Longmans, 1847.

ELEMENTS of Geometry, indeed! it would puzzle a *Cantab* to tell for what purpose this book has been written; does "J. D." know that the Elements of Euclid are still in existence? or does he know that there are many other elements of geometry, and some of them very unelementary? "J. D." must certainly have mistaken his object, or this emanation of his brain would never have seen the light. But what grieves us most is to see the highly respectable firm of Longman and Longmans superadded as the publishers of this, the very worst attempt that has ever been made at the composition of geometrical elements.

Railway Locomotion and Steam Navigation, their Principles and Practice. By JOHN CURR, of New South Wales. London: John Williams and Co., 1847.

THIS is certainly one of the most impertinent and worthless books that ever was written. The author, with matchless effrontery, calls in question the qualifications of our mathematicians and engineers, and considers them nothing better than a squad of ninnyhammers; but, John Curr, do not snarl so boldly, for we can assure you that there is in England a mathematician who can tell how many cow tails will reach to the moon, and a very simple affair he makes of it, for he says that one will do it, if it be long enough! We have an engineer in England who has made a double pathway and reared a range of arches under the belly of old Father Thames; there is another, who has formed the bold scheme of suspending an aerial tunnel over the Menai Straits; there is another, who has made the cliffs of Dover topple into the sea like snow from a house side, and would think it no great achievement to place the rock of Gibraltar on the other side of the strait. We have engineers in England who have put London and Edinburgh cheek-by-jowl; there are others who propose to join the Atlantic and Pacific Oceans, and also the Red and Mediterranean Seas; and last, but not least, there are others who propose to bore a hole through the Alps. All this and much more they have done, and propose to do. And yet,—Oh, John Curr! John Curr, oh!

Correspondence.

CAST-IRON GIRDERS.

SIR,—Your correspondent, "A Lover of Mechanics" (No. 250), states that a "girder, 18 feet long, 1 foot deep, weighing 10 cwt., and (*ii*) only equal to bear a load of 10 cwt." With your leave, we may test the accuracy of this assertion. 10 cwt. is equal to 17,920 oz.; this, divided by 4·165 oz., the weight of a cubic inch of cast-iron, will give 4,302·521 cubic inches; divide this quotient by 234, the number of lineal inches in girder (18 feet = 216 inches × 18 inches for bearings), and we have 18·386 inches as the area of section. This metal for a girder, 12 inches deep, may be disposed as follows:—top flange, 2 inches; bottom flange, 6 inches; body, 10 inches; and angles, ·386 inches,—equal, 18·386 inches of section.

The formula of Mr. E. Hodgkinson will give us:—$(12^3 \times 6) - (11^3 \times 5) \div (18 \times 12)$ equal $(10368 - 6655) \div 216 = 17·19 - 4$ of this will give 11·46 tons, the ultimate strength of girder. If "A Lover of Mechanics" will, on the principle of the *balance*, reconcile this result with his "10 cwt.," I shall be glad to admit that his "suggestion may (*ultimately*) lead to some improvement in the construction of bridges."—I am, Sir, &c.,

Nov. 29, 1847. J. M. MCCULLOCH.

Miscellanea.

SHAKSPEARE'S HOUSE.—A magnificent audience filled Covent Garden Opera House, kindly granted by Mr. Beale, on Tuesday night, to witness such an exhibition of dramatic talent as has never before been seen in one evening. The proceeds will materially lessen the responsibility of the committee who have purchased Shakspeare's house; but 500*l.* are still needed to complete the arrangement. The prologue, written by Mr. Chas. Knight, and not recited in consequence of a slight disturbance raised by some who thought the pit had been *curtailed* too much, opens with this charming allusion:—

"The Macedonian stood within the gates
Of the devoted Thebes. Relentless hates
Ask'd to be loos'd in bloodshed and in fire:
Spare not—the conqueror cried:—Yet stay! the lyre
Of glorious Pindarus in Thebes was strung—
Search for his House these fated piles among:
Perish the city, down with every tower,
But save, from ruin save the Muses' sacred bower.

"The victor Time has stood on Avon's side
To doom the fall of many a home of pride;
Rapine o'er Evesham's gilded fame has strode,
And gorgeous Kenilworth has paved the road:
But Time has gently laid his withering hands
On one frail House—the House of Shakspeare stands:
Centuries are gone—fallen 'the cloud-capp'd towers;'
But Shakspeare's home, his boyhood's home is ours."

LARGE RAILWAY GIRDERS.—Within the last few days some interest has been excited at Witham by the arrival of some very large sized cast-iron girders, for two of the bridges on the line. These girders, which were cast at Derby, are said to be the largest single girders which have ever been cast, with one exception; they are fifty-three feet four inches and a half in length, and weigh about thirteen tons each.

OXFORD ARCHITECTURAL SOCIETY.—At a meeting on the 17th ult. the report of the committee was read by the secretary; it alluded to the progress made in the work of restoration at Dorchester Abbey Church, and mentioned that the altar is the gift of an unknown benefactor, and that the good effect of the chancel has been much enhanced by the offering of some hangings to serve as a reredos, and that the restoration of the east window is now complete. The committee expressed a hope that the elevation of the chancel roof further to the westward would not be prevented by the want of the necessary funds. The report next directed the attention of members to the proposed restoration and the colouring in the sacrarium of Swincomb Church, Oxfordshire, and concluded by recapitulating to members the rules to be observed in the election of a president and members to serve on the committee. A communication was then read by the secretary from the Rev. C. Pearson, corresponding secretary, describing nine churches in Herefordshire, in the neighbourhood of Knebworth. The question of the best mode of warming churches was then brought before the society by the president. The Rev. W. Sewell stated some of the objections which can be urged against warming by stoves; he alluded to the irregularity of the temperature which they diffuse, and to the danger of fire which they are found to involve, and was anxious for information on the use of braziers. The president observed that the best mode of warming churches was an important practical question of some difficulty. He mentioned the disadvantages attending the use of charcoal in braziers, especially the dust which they permit to escape. The Rev. T. Chamberlain spoke favourably of the result, in St. Thomas's parish church, of the introduction of movable stoves, nearly on the Ecclesiological Society's plan. They are intended for coke. The Rev. J. L. Patterson suggested that an arched wire covering might repress a good deal of the dust, that in some churches openings might be made in the floor in a style appropriate to the encaustic tiles, and underground pipes might be introduced, but that an objection to this mode of conveying heat is, that it can only be introduced with advantage into new churches, and entails much expense. Mr. Patterson mentioned the success which had attended the introduction of braziers into two churches with which he was acquainted. Mr. F. Meyrick, of Trinity College, was anxious to learn whether it would not be possible to make chimneys ornamental. The president mentioned the introduction of an ornamental chimney into Merton College, and of a pinnacle at Abingdon pierced to admit of the escape of smoke.

CAMBRIDGE ANTIQUARIAN SOCIETY.—At a meeting of the Cambridge Antiquarian Society last week, Professor Willis made some remarks on a clock, found in an old house near Royston, but now in the museum of the society, for which it had been purchased by the private subscriptions of a few of the members. He considered it to have been made in the time of Henry VIII., but not in England. The works having an escapement and pendulum, could not be of that date, since a pendulum is believed to have been first applied to clocks in the year 1673. The case is in the form of a tower, with corner pinnacles. The parapet of the sides is ornamented with what is termed flamboyant tracery, formed of "pierced work." On each side of the face is a pile of buttresses, supporting an ogee arch, inclosing the clock-face, the space between which and the arch is filled up by a mass of most beautiful "stumped" tracery. As stumped tracery was not used in England or France, the professor supposed the clock was made in Germany, probably at Nuremburg. He dates it at about the year 1500. He remarked that this case, being ornamented with true Gothic mouldings, arches, and pinnacles, disproved Mr. Pugin's statement,—that architectural forms were not to be applied to small domestic objects.

DRAWING-ROOM DECORATION.—In India the plastered walls of rooms are stamped when moist, and worked into patterns, over which is spread a varnish of powdered talc, which closely resembles the richness and hue of new and unused frosted silver plate. This might be introduced into England, as a very cheap and elegant drawing-room decoration.—*Patent Journal.*

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